IN THE CLAIMS:

Claim 1 (original): A nanometric composite for use in dielectric structures to reduce interfacial polarization, comprising:

a matrix of polymer; and

nano-particulate fillers;

wherein internal charge is modified.

Claim 2 (original): A nanometric composite according to claim 1, wherein the polymer is selected from the group consisting of epoxy, polyolefin, ethylene propylene rubber and polyetherimide.

Claim 3 (currently amended): A nanometric composite according to claim 1, wherein the polymer is polyolefin and wherein the filler is ~~selected from the group consisting of inorganic oxides, metal oxides, titanates, silicas, particles coated with coupling agents, and nano-sized polymers~~ silane coated silica.

Claim 4 (currently amended): A nanometric composite according to claim 1, wherein particulate size is ~~comparable to~~ on the order of the polymer chain length so that the particulate and the matrix polymer interact cooperatively, the polymer being cross-linked polyethylene and the filler being silane coated silica.

Claim 5 (currently amended): A nanometric composite according to claim [[1]] 3, wherein the composite has a filler loading of 10%.

Claim 6 (currently amended): A nanometric composite for use in dielectric

structures to reduce interfacial polarization, comprising:

a matrix of ~~thermoset polymer~~ cross-linked polyethylene; and

nano-particulate fillers;

wherein particulate size is comparable to polymer chain length so that the particulate and the matrix polymer interact cooperatively so that internal charge is modified.

Claim 7 (currently amended): A nanometric composite according to claim 6, wherein the ~~polymer is selected from the group consisting of epoxy, polyolefin, ethylene propylene rubber and polyetherimide~~ filler is silane coated silica.

Claim 8 (original): A nanometric composite according to claim 6, wherein the filler is selected from the group consisting of inorganic oxides, metal oxides, titanates, silicas, particles coated with coupling agents, and nano-sized polymers.

Claim 9 (original): A nanometric composite according to claim 6, wherein the composite has a filler loading of 10%.

Claim 10 (original): A dielectric structure comprising a nanometric composite comprising:

a matrix of polymer; and

nano-particulate fillers;

wherein internal charge is modified.

Claim 11 (currently amended): A dielectric structure according to claim 10, wherein the polymer is cross-linked polyethylene ~~selected from the group consisting of epoxy, polyolefin, ethylene propylene rubber and polyetherimide~~.

Claim 12 (currently amended): A dielectric structure according to claim [[10]] 11, wherein the filler is silane coated silica. ~~selected from the group consisting of inorganic oxides, metal oxides, titanates, silicas, particles coated with coupling agents, and nano-sized polymers~~.

Claim 13 (currently amended): A dielectric structure according to claim [[10]] 12, wherein particulate size is comparable to polymer chain length so that the particulate and the matrix polymer interact cooperatively.

Claim 14 (currently amended): A dielectric structure according to claim [[10]] 12, wherein the composite has a filler loading of about 2% to about 20%.

Claim 15 (original): dielectric structure according to claim 10, wherein the composite has a filler loading of about 10%.

Claim 16 (original): A dielectric structure according to claim 12, wherein the composite comprising a nano-size polymer has a filler loading ranging from about 2% to about 40%.